

Asthma and Allergy

Allergy plays an important role in asthma, as one of the major factors associated with the cause and persistence of asthma. Around 80% of people with asthma have positive allergy test results.

Allergy and asthma are very common

Allergy is very common in Australia and New Zealand, affecting around 20% of people. Asthma is also common, affecting around 10% of people. Globally, the prevalence of allergy is continuing to increase, particularly in developed countries, such as Australia and New Zealand.

What is allergy?

Allergy occurs when the immune system in a person reacts to allergens which are substances in the environment that do not cause problems for most people. This reaction leads to inflammation (redness and swelling) that causes allergic conditions and can affect different parts of the body, such as:

- Allergic rhinitis (hay fever) which affects the nose and eyes.
- Eczema or urticaria (hives) which affect the skin.
- Anaphylaxis (the most severe allergic reaction) which can affect the whole body.
- Asthma which affects the lungs.

Allergens are mostly found in house dust mites, pollen, pets, moulds, some antibiotic medicines, insect stings or bites, latex (natural rubber) and foods.

What is asthma?

People with asthma experience a narrowing of the airways in the lungs, which obstructs the flow of air into and out of the lungs. This narrowing can be reversed using medications and people with asthma can therefore lead normal, active lives if they take regular preventer medication.

Asthma is most easily recognised by the following symptoms:

- Wheezing when breathing out.
- Persistent irritable coughing, especially at night.
- Difficulty in breathing and shortness of breath.
- Tightness and heaviness in the chest.
- Wheezing or coughing with exercise (exercise induced asthma).

Triggers for asthma include allergens, infections, exercise, cold air, changes in temperature and cigarette smoke. There may, however, be other causes for these symptoms, so you should always see your doctor for advice.

How does allergy play a role in asthma?

There are two main ways in which allergy plays an important role in asthma:

- Allergy itself can produce the allergic inflammation in the airways.
- Exposure to one or more allergens can trigger an asthma attack.

Pollen can directly trigger asthma

Some people with moderate or severe allergic rhinitis believe that their allergic rhinitis turns into asthma or that it makes them tight in the chest or wheeze. However, pollen can directly trigger asthma as well as allergic rhinitis. Small particles of allergens can penetrate deep into the airways of the lung. Thunderstorms can also contribute to this:

- When pollen granules come into contact with water, starch granules are released that are small enough to be breathed into the airways, causing allergic rhinitis and asthma in some people
- If you wheeze mostly during spring and/or summer, see your doctor for appropriate advice.

How do you find out if allergy is playing a role in your asthma?

After taking your medical history, your doctor may perform skin prick tests or blood tests for allergen specific IgE to demonstrate the presence of antibodies to one or several allergens. These tests are medically and scientifically proven. Your doctor may decide to refer you to a clinical immunology/allergy specialist for testing, particularly in the case of suspected severe allergies, including those to foods, medicines or insects.

Effective management of asthma involves control of allergy

It is essential to determine if allergies are an important factor in your asthma. Once a certain substance has been identified to cause you an allergic reaction, you should try to avoid, remove or minimise exposure to it whenever possible. This will improve your asthma symptoms.

Asthma and allergy treatments

If you have asthma and untreated allergic rhinitis (hay fever), it can be more difficult to control asthma symptoms. Treatment options for allergic rhinitis include:

- **Intranasal corticosteroid sprays** are the most effective long-term medication for allergic rhinitis (hay fever). Like preventer medication for asthma they need to be used each day to be effective in controlling asthma, and lessening the need for asthma medication.
- **Non-sedating antihistamines** are used to treat allergic rhinitis (hay fever) symptoms and are safe for people with asthma.
- **Combination medications** containing an antihistamine and intranasal corticosteroid spray are available, and offer the combined advantages of both medications.
- **Allergen immunotherapy** is a long-term treatment which alters the immune system's response to allergens and has been shown to improve asthma control in some people. It involves the administration of gradually increasing amounts of allergen extracts which are usually injected or given sublingual (under the tongue).

Medications which can cause problems for people with asthma include aspirin, nonsteroidal anti-inflammatory drugs and beta blockers. Some natural treatments such as Echinacea and royal jelly can cause life threatening allergic reactions (anaphylaxis) in some people with asthma. It is important to advise your pharmacist and doctor of any medications or natural treatments you are taking.

People with asthma should have a regularly reviewed asthma action plan, developed in consultation with their doctor, including asthma medications (preventers and relievers), and how these may need to be increased or decreased.

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